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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

		Application Number	09/963,684
		Filing Date	September 27, 2001
		First Named Inventor	Yoshinori KANO
		Art Unit	3724
		Examiner Name	J. D. Prone
Total Number of Pages in This Submission	11	Attorney Docket Number	492322002100

ENCLOSURES (*Check all that apply*)

- [X] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [X] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [X] Other Enclosure(s) (please Identify below):

  Return Receipt Postcard

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	MORRISON & FOERSTER LLP		
Signature	Alex Chtime 31,942		
Printed name	Barry E. Bretschneider		
Date	August 3, 2005	Reg. No.	28,055

PTO/SB/17 (12-04v2)
Approved for use through 7/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 500.00

Complete if Known	
Application Number	09/963,684
Filing Date	September 27, 2001
First Named Inventor	Yoshinori KANO
Examiner Name	J. D. Prone
Art Unit	3724
Attorney Docket No.	492322002100

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 03-1952 Deposit Account Name: Morrison & Foerster LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**

☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
Application Type	Fee ($)	Small Entity Fee ($)	Fee ($)	Small Entity Fee ($)	Fee ($)	Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 20 =	_____ x	_____ =	_____

Multiple Dependent Claims	
Fee ($)	Fee Paid ($)
_____	_____

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 3 =	_____ x	_____ =	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	_____ /50	_____ (round up to a whole number) x	_____ =	_____

4. OTHER FEE(S) **Fees Paid ($)**

Non-English Specification, $130 fee (no small entity discount)

Other (e.g., late filing surcharge): 1402 Filing a brief in support of an appeal 500.00

SUBMITTED BY

Signature	Alex Chitsaz 31,942	Registration No. (Attorney/Agent)	28,055	Telephone	(703) 760-7743
Name (Print/Type)	Barry E. Bretschneider			Date	August 3, 2005

va-125561

PATENT
Docket No. 492322002100

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Yoshinori KANO *et al.*

Serial No.: 09/963,684

Filing Date: September 27, 2001

For: LINEAR MOTOR AND ELECTRIC COMPONENT FEEDING APPARATUS

Examiner: Jason D. Prone

Group Art Unit: 3724

APPELLANTS' OPENING BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a timely appeal from the final rejection of claims 7, 13 and 14 in this application.

I. REAL PARTY IN INTEREST

The real party in interest is Hitachi High-Tech Instruments Co., Ltd., of Gunma, Japan, the assignee of appellants' entire, right, title and interest in this application.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences within the meaning of 37 CFR 41.37(c)(1)(ii) known to appellants or his undersigned counsel.

III. STATUS OF CLAIMS

Claims 7, 13 and 14 (reproduced in the attached Appendix), which are under final rejection, are pending in this application. Claims 8-12 have been cancelled, and claims 1-6 have been withdrawn from consideration.

Claims 7, 13 and 14 have been rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. Claims 7, 13 and 14 have been rejected under 35 USC 112, second paragraph, as indefinite. Claims 7, 13 and 14 have been rejected under 35 USC 102(b) as anticipated by Itagaki.

IV. STATUS OF AMENDMENTS

Appellants filed a Response Under 37 CFR 1.116 on March 4, 2005, without amending claims in response to the final Action dated December 6, 2004, so the claims on appeal stand as presented in the Amendment Under 37 CFR 1.111 filed October 18, 2004.

V. SUMMARY OF CLAIMED SUBJECT MATTER

This invention is a feeding apparatus that feeds electronic components to a main body of an electronic component mounting apparatus that mounts the electronic component on a printed circuit board. As shown in FIG. 3A of the application, feeding portion (feeding apparatus) 3 feeds electronic components to main body 2 of the mounting apparatus. The feeding apparatus 3 includes tape cassette (component feeding unit) 13, which contains the electronic components in compartments of the tape wound in the cassette, and linear motor 14, which moves the component feeding unit 13 to the main body 2 for component pick up. The linear motor 14 includes supporting bases (stationary members) 44, 45, which have a bar shape extending normal to the primary plane of the component feeding unit 13, and moving member 48, which moves along the stationary members 44, 45, driven by the electromagnetic force generated between the moving member 48 and the stationary members 44, 45. The stationary members 44, 45 are attached to slide platen 11, which also has a bar shape extending normal to the primary plane. The moving member 48 is attached to slide base (unit base) 12, which supports the component

feeding unit 13 and is slidably attached to the slide platen 11 via slide rail 43a. A plurality of fins (heat dissipation fins) 71 is attached to a vertical portion (sidewall) 30 of the unit base 12 opposite from the moving member 48. The fins 71 also have a bar shape extending normal to the primary plane.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Examiner rejected claims 7, 13 and 14 under 35 USC 112, first paragraph, as failing to comply with the written description requirement.

The Examiner rejected claims 7, 13 and 14 under 35 USC 112, second paragraph, as indefinite.

The Examiner rejected claims 7, 13 and 14 under 35 USC 102(b) as anticipated on Itagaki.

VII. ARGUMENT

A. Claims 7, 13 and 14 Comply With the Description Requirement Because A Plurality of Fins is Shown in FIG. 3A.

Independent claim 7 recites a plurality of heat dissipation fins formed on the unit base for dissipating heat in the moving member. The Examiner contended in the final Action dated December 6, 2004 that the portion of the specification, i.e., page 6, lines 14-21, cited by appellants in the amendment filed October 18, 2004, failed to show support for the plurality of heat dissipation fins recited in claim 7. In the response filed March 4, 2005, appellants explained that the translation from Japanese, a language that is not as strict about the difference between singular and plural expressions as is English resulted in the presentation of the heat dissipation fins in a singular form in the body of the specification but that FIG. 3A, which is the original FIG. 3, of the application clearly shows five heat dissipation fins.

"It is also clear that drawings alone may provide a 'written description' of an invention as required by §112." *Wang Laboratories, Inc. v. Toshiba Corporation*, 993 F.2d 858, 866, 26 USPQ2d 1767, 1789 (Fed. Cir. 1993). "An applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as

words, structures, figures, diagrams, and formulas that fully set forth the claimed invention." MPEP 2163.I.

FIG. 3A of this application, which was FIG. 3 at the time of the filing of this application, shows five heat dissipation fins 71. The unit base (slide base) 12 consists of base block 22, slide block 23, rib portion 32, joint portion 21a connecting the base block 22 and the slide block 23, and another join portion 21b connecting the base block 22 and the rib portion 32. The base block 22 consists of horizontal portion 26 and slant portion 27, and the slid block 23 consists of upper horizontal portion 29, the vertical portion 30 and lower portion 31. The heat dissipation fins stand on the vertical portion 30 to face the rib portion 32 and forms a unitary unit with the slide block 23. The rib portion 32 is placed so as to make room for the heat dissipation fins. This description of FIG. 3A is provided at page 5, line 30 - page 6, line 21, of the specification.[1] Based on this description and the original FIG. 3 of this application, persons skilled in the art would understand that there are five heat dissipation fins standing on the vertical portion 30 and that appellants were in possession of the claimed plurality of heat dissipation fins when the application was filed.

In the Advisory Action dated March 25, 2005, the Examiner stated, "The drawings are very confusing and inconsistent from each other. ... In Figure 3A, item 71 (heat dissipation fin) is pointing to a single structure resembling a rectangle missing a corner and in Figure 1, item 71 pointing to a different area of that same single rectangular-like structure leading the examiner to believe that the rectangular-like structure is the fin." As is explained above and also in section V of this brief, the "rectangular-like structure" is a vacant space between the vertical portion 30 and

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[1] During the interview with the Examiner held January 29, 2003, appellants' representative explained the structure of FIG. 3 using an annotated drawing faxed to the Examiner on January 28, 2003. At the interview the Examiner requested the representative to revise FIG. 2 of this application so as to be consistent with the structure shown in FIG. 3. Interview Summary dated January 29, 2003; Paper No. 10. Appellants complied with this requirement and submitted revised FIG. 2 on September 4, 2003, which was accepted in the Action dated November 18, 2003.

the rib portion 32 and thus is not a heat dissipation fin as the Examiner alleges. Rather, the five heat dissipation fins are located in the rectangular-like space.

The Examiner's opinion that a portion of appellants' disclosure is confusing, which is not, does not provided a reasoned explanation of why the appellants' specification does not comply with 35 USC 112, first paragraph. A careful reading of the specification and the drawings should have given the Examiner a proper understanding of the disclosures of the specification and the drawings.

Thus, claims 7, 13 and 14 comply with the written description requirement because FIG. 3A of the application shows a plurality of heat dissipation fins.

B. Claims 7, 13 and 14 Are Not Indefinite Because Claim language Provides Clear Warning to the Public.

In the final Action, the Examiner explained the indefiniteness rejection as follows:

> In regards to line 6 of claim 7, the phrase "a plurality of heat dissipation fins" is unclear. It is uncertain what the structure the additional fins incorporate and where there are located in reference to the original fin on the unit base. In regards to claim 14, the phrase "the heat dissipation fins are disposed on a sidewall of the unit base" is unclear. In Fig. 2, the fins (71) are clearly located on an interior portion of the unit base not on a side that could be considered a sidewall.

The Examiner seems to have made three arguments in support of the indefiniteness rejection, i.e., 1) the expression "a plurality of" is unclear; 2) the structure of the heat dissipation fins is not recited in the claims, and 3) the FIG. 2 does not show the claimed sidewall. All of these arguments are factually and legally incorrect.

1. The "A Plurality of" Language Is Not Indefinite Because It Has The Ordinary Meaning of "More Than One."

The word "plurality" is used extremely commonly in patent claims to mean "more than one." A recent decision confirms this definition. "We therefore conclude that 'plurality' encompasses all of the relevant definitions; namely, relating to or consisting of or containing more than one, the state of being numerous, and large number or quantity." *Bilstad v. Wakalopulos*, 386 F.2d 1116, 1123, 72 USPQ2d 1785, 1801 (Fed. Cir. 2004). The expression "a

plurality of heat dissipation fins" in the claims encompasses "more than one heat dissipation fin." There is nothing unclear about the meaning of this expression.

2. Claim 7 Is Not Indefinite Because The Claim Provides Clear Warning to The Public.

MPEP 2173.02 explains the application in examination of 35 USC 112, second paragraph, as follows:

> In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph by providing clear warning to others as to what constitutes infringement of the patent.

Under this standard, the Examiner's analysis is defective since it fails to determine whether such persons skilled in the art would get clear warning of, i.e., would be able to understand, what the claims cover. Claim 7 recites a plurality of heat dissipation fins formed on the unit base for dissipating heat in the moving member, which the Examiner seems to find indefinite as a whole statement. There is nothing unclear about this statement including the expression "a plurality of, " as explained in section VII.B.1. Persons skilled in the art would understand that his product would not infringe claim 7 if it has only one heat dissipation fin on its unit base and that his product would infringe if the product has more than one heat dissipation fin on the unit base and includes other limitations of the claim. Thus, claim 7 provides clear warning to others as to what constitutes infringement of the claim.

The Examiner contends that claim 7 is indefinite because the structural relationship among the claimed heat dissipation fins and their positioning with respect to the unit base are not recited in the claim. The recitation of the structural details does not go to the question of indefiniteness but rather to the scope of the claims. Appellants disclosed the structure of the five heat dissipation fins formed on the unit base in FIG. 3A of the application, as explained in section VII.A. The figure also shows that the five heat dissipation fins stand perpendicular to the unit base at an equal separation among them. However, appellants chose to secure broader claim

scope by not reciting such structural details of the heat dissipation fins in claim 7, while some of the structure of the heat dissipation fins is recited in claim 14.

Claim 7 is not indefinite because it provides clear warning to others as to what constitutes infringement of the claim.

3. Claim 14 Is Not Indefinite Because The Examiner Has Not Raised Any Question of Indefiniteness.

Claim 14 states that the heat dissipation fins are disposed on a sidewall of the unit base so as to be perpendicular to the sidewall. The Examiner contends that claim 14 is indefinite because FIG. 2 does not show the claimed sidewall. However, the Examiner failed to point out any indefiniteness in the language of claim 14 itself. In fact, the Examiner understood the scope of claim 14 properly and compared it to the structure shown in FIG. 2.

If anything, this rejection should have been framed as a rejection under 35 USC 112, first paragraph, but not under the second paragraph. Had the Examiner rejected claim 14 under 35 USC 112, first paragraph, he would have failed as well because FIG. 3A shows the vertical portion (sidewall) 30 of the unit base 12 on which the heat dissipation fins 71 stand. With respect to FIG. 2, which appellants revised to be consistent with the structure shown in original FIG. 3 in response to the Examiner's request during the interview held January 29, 2003, the perspective nature of the drawing prevents all five fins from being shown, as appellants explained in the response filed March 4, 2005. Claim 14 is not indefinite because the Examiner failed to point out any actual indefiniteness.

Claims 7, 13 and 14 are not indefinite because they provide clear warning to the public as to what constitutes infringement of the claims.

C. Claims 7, 13 and 14 Are Not Anticipated By Itagaki Because Itagaki Does Not Disclose A Plurality of Heat Dissipation Fins.

Claim 7 recites a plurality of heat dissipation fins formed on the unit base for dissipating heat in the moving member, as explained in section VII.A. The Examiner equates the claimed unit base to Itagaki's feeding tables 15a, 15b, 15c, 15d and 15e and the claimed plurality of heat

dissipation fins to Itagaki's linear scale head 23, which is coupled with high-resolution linear scale 21 to form a detection system detecting the position of Itagaki's feeding table. However, each of Itagaki's feeding tables 15a, 15b, 15c, 15d and 15e has only one linear scale head 23. Nothing in Itagaki teaches or suggests that Itagaki's feeding table has more than one linear scale head, as appellants explained in the amendment filed October 18, 2004, and the response filed March 4, 2005.

In response to appellants' argument that Itagaki does not disclose a plurality of heat dissipation fins, the Examiner responded in the Action dated December 16, 2004 as follows:

> It is old and well known that any type of fin-like structure projecting off a base structure is capable of performing a heat dissipating function. Looking at Figure 2 of 61-239696, item "23" clearly has a fin-like structure and is perfectly capable of acting as a fin to the base a structure (15). Regardless of the disclosed function, item "23" is still capable of dissipating some amount of heat. (Emphasis added)

Thus, the Examiner failed to respond to appellants' argument that Itagaki's feeding table 15 does not have more than one linear scale head 23.

Furthermore, claim 14 states that the heat dissipation fins are disposed on a sidewall of the unit base so as to be perpendicular to the sidewall, as explained in section VII.B.3. Appellants point out that Itagaki's linear scale head 23 is placed parallel to the sidewall of Itagaki's feeding table 15, on which the high-resolution linear scale 21 is placed. Itagaki's linear scale head 23 cannot be placed perpendicular to Itagaki's sidewall as claimed, because the linear scale head 23 must face the high-resolution linear scale 21 to form the position detecting system.

Claims 7, 13 and 14 are not anticipated by Itagaki because Itagaki does not teach or suggest the claimed plurality of heat dissipation fins.

CONCLUSION

For the foregoing reasons, the Board should reverse the final rejection of claims 7, 13 and 14 in this application.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, appellants petition

for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. **492322002100**.

Respectfully submitted,

Dated: August 3, 2005

By: Alex Chitsaz
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APPENDIX OF CLAIMS ON APPEAL

7. An apparatus for feeding electronic components comprising:

at least one unit base carrying at least one component feeding unit;

a platen for sliding the unit base thereon;

a linear motor comprising at least one stationary member mounted on the platen and a moving member mounted on the unit base;

a plurality of heat dissipation fins formed on the unit base for dissipating heat in the moving member.

13. The apparatus for feeding electronic components of claim 7, wherein the heat dissipation fins are disposed parallel with a direction of a sliding movement of the unit base along the platen.

14. The apparatus for feeding electronic components of claim 7, wherein the heat dissipation fins are disposed on a sidewall of the unit base so as to be perpendicular to the sidewall.